IN THE CLAIMS:

1. A base station, servicing a macrocell, comprising:

at least one steerable N-dimensional (N≥2) array, co-located with an antenna of said base station, for serving a microcell within the macrocell.

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2. The base station of claim 1, wherein said at least one steerable N-dimensional array serving the microcell is co-located on an antenna tower with the antenna serving the macrocell.

3. The base station of claim 1, wherein the microcell includes a hot spot.

4. The base station of claim 1, wherein said base station includes a steerable N-dimensional (N≥2) array for each microcell within the macrocell.

5. The base station of claim 1, said at least one steerable N-dimensional array further including,

at least two antenna elements, and

an N-dimensional digital filter for receiving inputs from said at least two antenna elements and processing the inputs to produce a beamformed output.

6. The base station of claim 5, wherein at least one of inputs and outputs of said at least two antenna elements are weighted to steer a resultant output beam of said at least one steerable N-dimensional array.

7. The base station of claim 6, wherein the at least one of inputs and outputs of said at least two antenna elements are weighted using variable filter tap weights.

8. The base station of claim 1, wherein said at least one steerable N-dimensional (N≥2) array serves a hot spot.

9. The base station of claim 6, wherein an angular spread and look direction of the resultant output beam of said at least one steerable N-dimensional array are varied by varying a number of filter taps.

10. The base station of claim 5, wherein said at least two antenna elements are arranged in a two-dimensional plane or on a surface of a cylinder.

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11. The base station of claim 9, wherein complex coefficients for the filter taps are given by:

$$w_j = \cos\left[2\pi \frac{Kd}{\lambda} \sin\theta\right] - i \cdot \sin\left[2\pi \frac{Kd}{\lambda} \sin\theta\right]$$

where k= the filter tap,

d= antenna element spacing,

θ= look direction of the resultant output beam, and

λ= wavelength of an incident signal.

12. The base station of claim 1, wherein said base station is part of a TDMA system and the macrocell and the microcell are separated in the frequency domain.

13. The base station of claim 1, wherein said base station is part of a CDMA system and the macrocell and the microcell are separated in one of the frequency and the code domains.

14. A method of servicing at least one microcell in a macrocell, comprising:

co-locating at least one steerable N-dimensional (N≥2) array with an antenna of said base station;

steering a resultant beam of the at least one steerable N-dimensional (N≥2) array toward the at least one microcell.

15. The method of claim 14, wherein said at least one steerable N-dimensional array serving the microcell is co-located on an antenna tower with the antenna serving the macrocell.

16. The method of claim 14, wherein the microcell includes a hot spot.

17. The method of claim 14, wherein said co-locating step includes co-locating a steerable N-dimensional (N≥2) array with the base station for each microcell within the macrocell.

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18. The method of claim 14, wherein the at least one steerable N-dimensional array includes at least two antenna elements and an N-dimensional digital filter for receiving inputs from the at least two antenna elements and processing the inputs to produce a beamformed output.

19. The method of claim 18, further comprising weighting at least one of inputs and outputs of said at least two antenna elements to steer the resultant output beam of said at least one steerable N-dimensional array.

20. The method of claim 19, wherein said weighting step includes weighting the at least one of inputs and outputs of the at least two antenna elements using variable filter tap weights.

21. The method of claim 14, wherein the at least one steerable N-dimensional array serves a hot spot.

22. The method of claim 19, further comprising varying a number of filter taps of the resultant output beam of the at least one steerable N-dimensional array to vary an angular spread and look direction of the resultant output beam.

23. The method of claim 18, further comprising arranging the at least two antenna elements in a two-dimensional plane or on a surface of a cylinder.

24. The method of claim 22, wherein complex coefficients for the number of filter taps are given by:

$$w_j = \cos\left[2\pi \frac{Kd}{\lambda} \sin\theta\right] - i \cdot \sin\left[2\pi \frac{Kd}{\lambda} \sin\theta\right]$$

where k= the filter tap,

d= antenna element spacing,

θ= look direction of the resultant output beam, and

λ= wavelength of an incident signal.

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25. The method of claim 14, wherein the base station is part of a TDMA system and the macrocell and the microcell are separated in the frequency domain.

26. The method of claim 14, wherein the base station is part of a CDMA system and the macrocell and the microcell are separated in one of the frequency and the code domains.

27. A base station, servicing a macrocell, comprising:

steerable N-dimensional (N≥2) array means, co-located with an antenna of said base station, for serving a microcell within the macrocell.

28. The base station of claim 27, wherein said steerable N-dimensional array means serving the microcell is co-located on an antenna tower with the antenna serving the macrocell.

29. The base station of claim 27, wherein the microcell includes a hot spot.

30. The base station of claim 27, wherein said base station includes steerable N-dimensional (N≥2) array means for each microcell within the macrocell.

31. The base station of claim 27, said steerable N-dimensional array means further including,

at least two antenna elements, and

N-dimensional digital filter means for receiving inputs from said at least two antenna elements and processing the inputs to produce a beamformed output.

32. The base station of claim 31, wherein at least one of inputs and outputs of said at least two antenna elements are weighted to steer a resultant output beam of said steerable N-dimensional array means.

33. The base station of claim 32, wherein the at least one of inputs and outputs of said at least two antenna elements are weighted using variable filter tap weights.

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34. The base station of claim 27, wherein said steerable N-dimensional ($N \geq 2$) array means serves a hot spot.

35. The base station of claim 32, wherein an angular spread and look direction of the resultant output beam of said steerable N-dimensional array means are varied by varying a number of filter taps.

36. The base station of claim 31, wherein said at least two antenna elements are arranged in a two-dimensional plane or on a surface of a cylinder.

37. The base station of claim 35, wherein complex coefficients for the filter taps are given by:

$$w_j = \cos\left[2\pi \frac{Kd}{\lambda} \sin\theta\right] - i \cdot \sin\left[2\pi \frac{Kd}{\lambda} \sin\theta\right]$$

where k= the filter tap,

d= antenna element spacing,

θ= look direction of the resultant output beam, and

λ= wavelength of an incident signal.

38. The base station of claim 27, wherein said base station is part of a TDMA system and the macrocell and the microcell are separated in the frequency domain.

39. The base station of claim 27, wherein said base station is part of a CDMA system and the macrocell and the microcell are separated in one of the frequency and the code domains.